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An Investigation Into the Relationship between Attitude and Emotion

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AN INVESTIGATION INTO THE RELATIONSHIP
BETWEEN ATTITUDE AND EMOTION

by

Marshall J. Webb

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of Loyola University in Partial Fulfillment of
the Requirements for the Degree of
Master of Arts

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LIFE

Marshall J. Webb was born in Chicago, Illinois, May 30, 1919.

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CHAPTER I

THE PURPOSE OF THE STUDY

In an attempt to outline what is contained in this particular investigation, the following question might be phrased: Are individuals who express their attitudes on an emotional basis poorly adjusted emotionally? If the reader would reflect on this question, he would form a good background or frame of reference for the development of the particular problem of this study.

In the field there are tests designed to give a measure of emotionality and tests designed to measure attitude toward specific objects or concepts. The present investigation will attempt to outline the background of the paper-and-pencil tests used, the manner in which the data were gathered, the findings, and what might be said about the hypothesis as to whether individuals who express their attitudes on an emotional basis are poorly adjusted emotionally.

A Revised Thurstone Attitude Toward the Church Scale, designed to give a partial score for the emotional content of the attitude, is the instrument of this study used to obtain a measure of attitude expressed on an emotional basis. The total attitude score also may be indicative of emotion. For the measure of general emotionality or emotional adjustment

the Pressey X-O Tests are used. Specifically, then, this paper is investigating the relationship, if any, between the factors of attitude and emotion as evidenced by response to two paper-and-pencil tests designed to give a measure of those factors.

This paper is limited as follows: first, in attempting to describe the factors involved in objective terms, and secondly, in the use of attempted quantitative measures of those factors. If any means could indicate the degree of relationship between general emotionality and an expression of attitude, or between knowledge and attitudes, it would suggest something of value from many points of view: religious, social, therapeutic, business.

A discussion of personality development generally will consider man not only as an individual unit but also as existing in a world filled with other human beings, other types of animals, and natural phenomena, all of which influence his life to some degree. It is not within the province of this paper to go deeply into the area of personality but only to the extent of an attempt to clarify the relative position, as it were, of the concepts of attitude and emotion in the total meaning of the term personality.

Allport collected the various definitions which were offered at different times by differently oriented writers. He divided them into theologic, philosophic, juristic, sociologic, biosocial, and psychologic definitions. He offered one of his own, which, forming the basis for his book on personality, may be accepted as representing the present-day

attitude: "Personality is the dynamic organization within the individual of those psychophysical systems that determine his unique adjustments to his environment."¹ Stagner supports the above definition by saying that "on the whole it meets adequately all the requirements of a scientific psychology of personality."²

Without listing all of the various and sundry forces that act on man from birth (or from conception, or in the biologic history of the ancestors), it is evident almost at once that the environment begins to establish rules under which the infant's needs may be satisfied. The basic needs of the tissues must be met, and the infant must work out some sort of compromise which will enable him to satisfy these drives and at the same time adapt himself to his environment. Associations are set up between an act on his part and certain environmental responses, and the foundations for patterns of adjustment to life situations are started in this way.

At an early age the child finds it possible to make his desires known by reproducing certain sounds. Of course, in the beginning he used symbols in a general way. At this early stage we see a word symbolizing or standing for something felt or known within the individual. In a similar manner we shall see in a later chapter how an opinion is used to symbolize an attitude.

1 G. W. Allport, Personality: A Psychological Interpretation, New York, 1937, 48.

2 R. Stagner, Psychology of Personality, 2nd ed., New York, 1948, 6.

Ströcker, Ebaugh, and Ewalt point out that "the child has shown varieties of activity which we interpret as emotion,"³ and the "emotional manifestations of a child also go through a period of change and adaptation to the environment."⁴ The authors go on to say that

in one sense an emotion may be said to represent an attitude or thought, or subjective or inner experience concerning some external object or phenomena which we invest with feeling or energy, this feeling being accompanied by physiologic alterations due to the concomitant activity of the autonomic nervous system.⁵

Here we see a reference to a way of thinking of attitude and emotion in a similar manner early in the life of the individual, in the development of personality. The present writer assumes that the manifestations seen in the adult have their roots in the patterns built up in the developing organism.

Kanner points out that

the question regarding the number of emotions, a pet preoccupation of earlier psychology, has become futile in the light of a broader psychobiologic attitude. The names of emotional expressions and attitudes are not the names of existing entities. They are snapshots from the linguistic camera, conveying an impression of the sum total of facts involved in a special type of human behavior. The meaning of the term "fear" implies the idea of existing or anticipated danger as well as the individual's attitude in the face of this danger.⁶

3 E. A. Strecker, F. G. Ebaugh, and J. R. Ewalt, Practical Clinical Psychiatry, Philadelphia, 1948, 7.

4 Ibid., 6.

5 Ibid., 7.

6 L. Kanner, Child Psychiatry, 2nd ed., Springfield, Illinois, 1948, 75.

Again we may get the notion of attitude and emotion being related and their place in the sum total of personality. Kanner speaks of transient emotional attitudes as

emotional reactions which are spread over a much longer period, are as a rule not dramatized, and are less dependent on instigation by specific happenings. They are protracted attitudes, moods, affective tones, governing all activity rather than episodic performances standing out as momentary outbursts from otherwise inconspicuous behavior.⁷

Attitude toward the church might be likened to the description given as well as there being a complement in emotion for the specific attitude.

Hurlock points out that it is of practical importance to know about the child's personality and that measurement of it at early levels is difficult and far from accurate, more so than at the older ages. In discussing projective techniques, and in reference to the Rorschach, she states that "this is then studied, to see whether it reveals emotions, attitudes, and mental sets of the child."⁸ Notwithstanding the added difficulty of measurement at the lower ages, within the concept of personality the terms emotions and attitudes again appear together.

A study of the relationships between belief and certainty, and desire, has been made by Lund.⁹ He presented twenty propositions--religious, political, ethical, and scientific--to over two hundred college

7 Ibid., 78.

8 E. B. Hurlock, Child Development, 2nd ed., New York, 1950, 596.

9 F. H. Lund, "The Psychology of Belief," J. abnorm. soc. Psychol., 1925, 20, 63-81, 174-196.

students, men and women. The subjects were first asked to rate each statement according to the degree of certainty or uncertainty, then according to the degree to which they desired the statement to be true or untrue. The correlation between average belief and average desire was .88. A point, aside from the fact that we may question the implication that our attitude toward truth be mere wishful thinking, is that in attempting to correlate attitude and emotion we might hope to get at factors that are more basic than desire.

Willoughby¹⁰ asked twelve sophisticated judges to rank twenty-five situations drawn from real life and modern literature in accordance with the amount of emotional maturity they judged to be indicated by the reaction described; the situations were believed by the experimenter to have religious significance. These attitudes, which might be classed as religious, were rated as emotionally immature. In this situation there is the attempt to get a measure between attitude and emotional maturity.

A study that, in part, comes closest to the present investigation, was made by Glick and Young¹¹ who attempted to delineate the rationalizations--which persons present for maintaining their religious attitudes--made by young people whose habits of church attendance was similar to that of their parents and by those whose attendance was divergent from that of

10 R. R. Willoughby, "The Emotional Maturity of Some Religious Attitudes," J. soc. Psychol., 1930, 1, 532-536.

11 P. C. Glick and K. Young, "Justification for Religious Attitudes and Habits," J. soc. Psychol., 1943, 17, 45-68.

their parents." Relationships are pointed out between religious habits and attitudes on the one hand and certain background experiences and personality traits. Among the 380 Protestant women in the original study there was a slight tendency for students favorable toward religion to have a more stable emotional adjustment than students who were unfavorable toward religion ($r = .20$).

In the present study we have to consider the possibility of obtaining a measure of each of these factors of emotion and attitude. The point of this investigation revolves around the question of whether people who express their attitude on an emotional basis are well adjusted. Besides the measure of emotionality or emotional adjustment, there is the measure of attitude and the emotion contained therein. Will the individuals who are excessively emotional or abnormally emotional express their attitude toward the church emotionally or intellectually?

Emotions and the Pressey X-O Tests, and attitudes and the Revised Attitude Toward the Church Scale, will be discussed in the chapter to follow. The survey and test results will be considered in a separate chapter. A final chapter will concern itself with summary and conclusions.

CHAPTER II

THE MEASURING INSTRUMENTS

In keeping with the thinking previously outlined, we may think of emotion as a factor in the concept of personality. What of emotion, then? How shall we think of it? Herr defines it as "conscious states of excitement, brought about by the recognition of a stimulating situation, and accompanied by disturbed conditions of the whole bodily mechanism."¹ The state of excitement is a dynamic one in the sense that it involves action-tendencies deep-seated in the organism and integrated with many vital functions.

Moore states that

the specific essential emotional reaction is one thing and a much simpler thing than the entire sequence of events in an affective experience. Essentially an emotion does not involve the higher generalizations of the intellect nor true volitional activity, but both may appear concomitantly or successively in the entire sequence of events in an affective experience. And it may at times be important to consider the entire sequence of events in order to understand a person's behavior rather than to confine our attention to what might be termed the bare essence of the emotion as such.²

1 V. V. Herr, How We Influence One Another, Milwaukee, 1945, 106.

2 T. V. Moore, Driving Forces of Human Nature, New York, 1948, 107.

Without going into the theories of emotions or into the various experiments that deal in one way or another with emotions, we can turn to the measures of emotion that bear most directly on this study.

There have been a number of attempts to measure what has been termed emotional maturity. Farnsworth³ reports that none of three procedures to measure emotional maturity yields data at all comparable with the data of either of the other two. This might suggest a difficulty in giving one name to different phenomena, or might suggest the difficulty of getting a measure of emotion.

From mental test data concerning sex differences in emotional response no conclusion emerges. Flemming⁴ claims that his male and female subjects possessed quite similar "interests," "worries," and "ideas concerning what things are wrong," as shown by scores on the Pressey X-O Tests. This same X-O Test is an instrument used in the present study and will be explained in greater detail later in this chapter.

Thorpe, in reference to the Pressey X-O Test, says it "has enjoyed extensive use and has been subjected to much examination."⁵ McGeoch and Whitely⁶ secured coefficients from .82 to .87 for a forty-eight hour

³ P. R. Farnsworth, "The Measure of Emotional Maturity," J. soc. Psychol., 1938, 9, 235-237.

⁴ E. G. Flemming, "Sex Differences in Emotional Responses," J. gen. Psychol., 1933, 8, 430-445.

⁵ L. P. Thorpe, Psychological Foundations of Personality, New York, 1938, 563.

⁶ As reported by Thorpe, Ibid., 565.

period in a careful study of the reliability of the X-O Test as a whole. Idiosyncrasy correlations ranged from .43 to .77 for the same period of time. The figures for longer periods between administrations were less adequate.

Allport says about the X-O Tests that "the method has point, but the principal difficulty with it is its low reliability; attitude or mood of the moment has marked influence upon the subject's response."⁷

The Murphys and Newcomb have said that "several investigators have pursued the hypothesis that liberals should have more unusual emotional reactions than conservatives. For this purpose the Pressey X-O Test is almost ideal, since one of the scores it yields is labeled 'idiosyncrasy.'"⁸ They also state that

one of the simplest, most satisfactory, and most widely used of the personality measures is the Pressey X-O Test. The trait which it is commonly assumed to measure is "emotionality." The test has the popular merit of being objective in the sense that there are no "questions" to answer, moreover, the significance of any particular response is almost completely concealed, so that it is relatively difficult to strive for a "good" score.⁹

7 Allport, Personality, 408.

8 G. Murphy, L. Murphy, and T. Newcomb, Experimental Social Psychology, rev. ed., New York, 1937, 939.

9 Ibid., 799.

La Pierre and Farnsworth say: "No adjustment inventory can be taken at its face value. At best it serves to warn the personality adjuster of possible potential dangers and to furnish clues for him to follow up."¹⁰ The Pressey X-O Test, an instrument of the present study, may be classed as an adjustment inventory. If the scores obtained indicate emotionality or emotional adjustment, they should well serve the purpose.

Emotion has been described as a dynamic factor. If we can measure emotionality of the moment, and at the same time get a measure of attitude toward a specific object or concept, we should get a measure of the degree of relationship between general emotionality and the attitude.

Studies from the psychological laboratories of Indiana University about the year 1920 form the basis of the development of a group scale for investigating the emotions by S. L. Pressey, commonly known as the Pressey X-O Tests.

The present form of the X-O Tests was developed from two earlier attempts in this direction.¹¹ The tests appear, each on one page, in a four-page folder, each page being six inches by nine inches. The content of the tests appears in the appendix.

¹⁰ R. T. La Pierre and P. R. Farnsworth, Social Psychology, 3rd ed., New York, 1949, 535.

¹¹ S. L. Pressey and L. W. Pressey, "Cross out Tests, with Suggestions as to a Group Scale of the Emotions," J. appl. Psychol., 1919, 3, 138-150; and S. L. Pressey and O. R. Chambers, "First Revision of a Group Scale Designed for Investigating the Emotions," J. appl. Psychol., 1920, 4, 97-102.

The first test consists of twenty-five lines of five words each. The selection of words for this test was made in the first place on the basis of extended experience in work with the insane and with delinquents. The present form of the test involves a very careful study of the per cents crossing out and circling each word. Each line has been planned to contain words of roughly the same amount of unpleasantness. The words are also arranged in a set scheme for purposes of analysis. The words are grouped as unpleasant because of their relation to emotions of disgust, fear, sex-feeling, and suspicion; and, finally, there is a set of "jokers." The jokers are words known, on the basis of preliminary results, to be pleasant or at least not unpleasant. There is one joker in each line. The jokers are aimed at giving a check--particularly in the use of the tests with psychotic or feeble-minded cases--as to whether the directions were understood.

In the scoring of the first test, the total number of words crossed out is first counted, and the number is written in the space for the total (line marked "t" at the beginning of the test). The number of times some other word has been circled, besides the word most commonly chosen as most unpleasant, is then counted; and this number is written in the "deviation space" headed "d."

The words of the second test were chosen carefully with reference to pathological conditions and criminology. The attempt is to present a free association test in group test form, and the words were taken in the

first place from the Kent-Rosanoff study.¹²

The first score of the second test is again in terms of the total of words crossed out (or richness in emotional association). The second score consists in the total number of deviates from modal choice, in the choice of words circled.

The third test is an attempt to put into a convenient group test form an ethical discrimination test. In general, an attempt has been made to obtain judgments as to the comparative importance of different types of wrong doings, or to obtain an indication as to the tendency of one's prejudices. Scoring of the third test is again in terms of the total words crossed out and the total number of deviations in the selection of the worst thing.

The fourth test has back of it experience with abnormal personalities and is framed with reference to the investigation of certain anxiety states. The attempt also was made to involve the content of certain types of delusion, in mental disease. As in the first test, the classification is not to be taken too seriously, but is at least suggestive and makes an interesting point of departure in analysis. Again the scoring is in terms of the total number crossed out and peculiar choice in words circled.

In the first summarizing of the examination, the total of words crossed out is first summed and is considered an indication of total affectivity or emotionality. The deviations are then added together, and

¹² G. H. Kent and A. T. Rosanoff, "A Study of Association in Insanity," Amer. J. Insanity, 67, Nos. 1 and 2, 1910.

the total is used as an expression of "total idiosyncrasy."

The author of the examination points out two features deemed to be important: (a) condensation of material and problem, and (b) saving of time and labor.

a) The examination is an extreme sample of condensation of matter on the blank. Each word in each test is in reality a separate question. For instance, the material of the last test is quite largely from Woodworth's questionnaire used in studying neurotic individuals in the army. This questionnaire consisted of such questions as: "Have you worried about smoking? Yes. No." The person taking the examination was to underline yes or no, according as one or the other was correct. Putting questions in this way, an eleven- by seventeen-inch sheet was required to ask 116 such questions. The same question is asked as unmistakably by including smoking in the lists of the fourth test, the instructions being that all things about which the subject has worried are to be crossed out. But the form of the X-O Tests permits 125 such words, plus the twenty-five questions as to which thing in each list is most worried about, in a space six by nine inches.

b) All the examiner does is to pass out the blanks and collect them again as each subject finishes. There is no technique in giving or other special procedure. The scoring is altogether objective.

Now, from the subject of emotions and one of the specific instruments of the present study, let us turn to the area of attitudes.

L. L. Bernard has said that

social psychology is concerned with the analysis of attitudes primarily because its function is to interpret those stimuli-response interrelationships between people in groups and between people and the material or tangible and symbolic aspects of institutions by means of which they communicate. . . . Contacts in modern society are overwhelmingly by means of interpretation of symbols. Symbolic expression is attitudinal expression. It is the function of the social psychologists to interpret this symbolic or attitudinal behavior and to give account of the methods by which it is integrated and the processes by which its meaning is communicated.¹³

Dennis points out that

modern psychology began with the measurement of sensory and motor characteristics. Learning, memory, and intelligence were next submitted to measurement. The measurement of attitudes was first attempted only about twenty years ago. The following article by Thurstone¹⁴ was one of the earliest, and one of the most influential in this new field.¹⁵

In the psychological literature the Thurstone scales have in the past usually been referred to as attitude scales. The term opinion, favored by sociologists, appears now also to be gaining acceptance among psychologists.

Opinions are sometimes measured by ratings, by rankings, or by paired comparisons, and these three simple techniques all yield essentially similar data according to La Pierre and Farnsworth. Opinions have also been

¹³ L. L. Bernard, An Introduction to Social Psychology, New York, 1926, 248-249.

¹⁴ L. L. Thurstone, "The Measurement of Attitudes," Amer. J. Sociol., 1928, 334, 530-536, 544-546, 553, 554.

¹⁵ W. Dennis, Readings in General Psychology, New York, 1949, 405.

measured by the questionnaire, the interview, and the case methods. La Pierre and Farnsworth¹⁶ go on to say that the Thurstone scheme of attitude measurement, in contrast to the opinion-scale method, has met with a warmer reception from measurement-minded social psychologists.

Thorpe says that "among the most promising of the recent attitude scales are those by Thurstone."¹⁷

A study by Gilliland,¹⁸ using Thurstone attitude scales filled out by students at three large universities and at three denominational colleges, indicated that few students are atheistic; that there is little change in attitude during the four years of college; and that denominational college students have a more favorable attitude than do university students.

The attitude scale used in the present study is the "Attitude toward the Church Scale, Thurstone, Revised, 1943," hereafter referred to as the revised scale. The revision was effected by V. V. Herr, S. J., of Loyola University, Chicago.

The original scale was devised by L. L. Thurstone and E. J. Chave of the University of Chicago, hereafter referred to as the original scale.

The authors of the original scale point out that "the very fact that one offers a solution to a problem so complex as that of measuring differences of attitude on disputed social issues makes it evident from the

16 La Pierre and Farnsworth, Social Psychology, 497.

17 Thorpe, Psychological Foundations of Personality, 572.

18 A. R. Gilliland, "The Attitude of College Students toward God and the Church," J. soc. Psychol., 1940, 11, 11-18.

start that the solution is more or less restricted in nature and that it applies only under certain assumptions."¹⁹ The assumptions may be outlined as follows:

1. An attitude is a complex affair which cannot be wholly described by any single numerical index.

2. We shall state or imply by the context the aspect of people's attitudes that we are measuring.

3. The concept attitude will be used here to denote the sum-total of a man's inclinations, feelings, prejudice or bias, preconceived notions, ideas, fears, threats, and convictions about any specific topic.

4. The concept opinion will here mean a verbal expression of attitude.

5. The opinion has interest only in so far as we interpret it as a symbol of attitude.

6. Neither a person's opinions nor his overt acts constitute in any sense an infallible guide to the subjective inclinations and preferences that constitute his attitude. We must postulate an attitude variable which is like practically all other measurable attributes in the nature of an abstract continuum, and we must find one or more indices which will satisfy us to the extent that they are internally consistent.

7. We shall not imply that the subject will necessarily act in accordance with the opinions that he has indorsed.

¹⁹ L. L. Thurstone and E. J. Chave, The Measurement of Attitude, Chicago, 1929, 5.

8. We take for granted that people's attitudes are subject to change.

9. An attitude scale is used only in those situations in which one may reasonably expect people to tell the truth about their convictions or opinions.

10. Opinions are multidimensional, and they cannot all be represented in a linear continuum; but the very idea of measurement implies a linear continuum of some sort. The linear continuum which is implied in a more or less judgment may be conceptual, and it does not necessarily have the physical existence of a yardstick.

The authors state that if one "is unwilling to grant these assumptions there is nothing to offer him. If they are granted we can proceed with some measuring methods that ought to yield interesting results."²⁰

Thurstone and Chave say that the first restriction on the problem of measuring attitudes is to specify an attitude variable and to limit the measurement to that. They go on to explain the unit of measurement by saying that

the only way we can identify the different attitudes is to use a set of opinions as landmarks for the different steps or parts of the scale. The final scale will then consist of a series of statements of opinions, each of which allocated to a particular point on the base line. If we start with enough statements, we may be able to select a list of forty or fifty opinions so chosen that they represent an evenly graduated series of attitudes. The separation

20 Ibid., 16.

between successive statements of opinion would then be uniform, but the scale can be constructed with a series of opinions allocated on a base line even though their base line separations are not uniform. For the purpose of drawing frequency distributions it will be convenient, however, to have the statements so chosen that the steps between them are uniform throughout the whole range of the scale.²¹

In the collection of opinions for the attitude toward the church scale, several groups of people and many individuals were asked to write out their opinions about the church; and literature was searched for suitable brief statements. By editing such material, a list of 130 statements was prepared, and the list was thought by Thurstone and Chave to be expressive of attitudes covering as far as possible all gradations from one end of the scale to the other.

Next came the sorting procedure where subjects were asked to sort the 130 statements into eleven piles to represent an evenly graded series of attitudes from those extremely against the church to those which are very much in favor of the church. A subject was not asked to state what he believed about any religious issue; he was merely asked to sort the statements into the eleven piles. The authors felt that this sorting would be done similarly by those who favor the church and by those who are antagonistic to the church.

Thurstone and Chave point out that

it is a fundamentally important matter that the eleven poles should not be described except to give a starting point such as neutrality and the two ends. If the eleven piles were defined by descriptive phrases such as is customary on rating scales of various kinds, the

21 Ibid., 16.

fundamental characteristic of the present measurement method would be destroyed. The reason for this is that the intervals between successive piles should be apparently equal shifts of opinions as judged by the subject. If they were labeled the intervals would be defined by the investigator, would be arbitrary and set by him. It is essential that the subject be given the freedom to adjust the slips in the piles so that the intervals in attitude from one pile to the next seem to him to be equal. That is the unit of measurement for the scale.²²

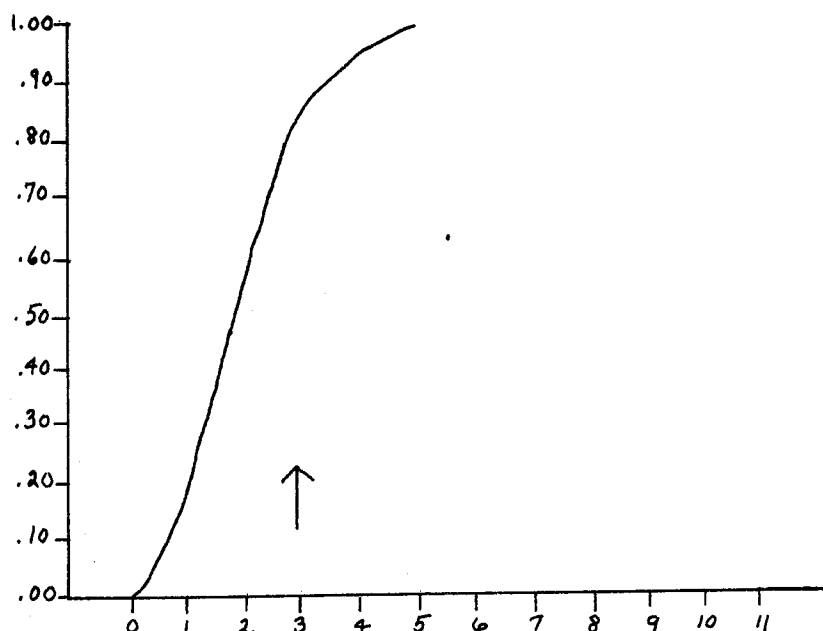
The scale value for each item was determined graphically. Each graph was plotted directly from the accumulative proportions as tabulated in the returns showing where each subject placed every one of the 130 statements. The accumulative proportions for two of the statements were as follows:²³

	<u>Scale</u>												
	<u>value</u>	<u>Q</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	<u>F</u>	<u>G</u>	<u>H</u>	<u>I</u>	<u>J</u>	<u>K</u>
No. 39	1.8	1.3	.16	.57	.85	.95	.99	.99	.99	1.0	1.0	1.0	1.0
No. 51	6.9	1.7	.00	.01	.01	.03	.08	.21	.54	.76	.91	.98	1.0

In Figure 1 statement No. 39 is represented. The graph shows that practically all of the subjects classified this statement in the five class intervals most favorable to the church. The statement is the following: "I believe the church is absolutely needed to overcome the tendency to individualism and selfishness. It practices the golden rule fairly well." The curve of Figure 1 crosses the 50 per cent level at the interpolated scale value of 1.8, which is assigned as the scale value for this statement.

22 Ibid., 30.

23 Ibid., 33.

FIGURE 1^a

SCALE VALUE FOR STATEMENT NO. 39 IN ORIGINAL
ATTITUDE TOWARD THE CHURCH SCALE
S=1.8 Q=1.3

a From Thurstone and Chave, The Measurement of Attitude, 37.

The scale value is indicated by a small vertical arrowhead. On either side of the arrowhead is a small vertical line. These two vertical lines indicate the two quartile points for the curve. The separation between these two marks is a measure of the ambiguity of the statement. In the present case the ambiguity, the Q-value, is 1.3, which is simply the difference between 2.6 and 1.3. If the statement is interpreted with regard to the specified attitude variable rather consistently, then the readers will place it at approximately the same position on the scale, and the

Q-value will then be correspondingly small.²⁴

In Figure 2 a similar graph is drawn for statement No. 51, which reads: "I feel I can worship God better out of doors than in the church and I get more inspiration there." This statement is toward the other end of the scale, and its scale value is 6.9. The ambiguity, or Q-value, is 1.7.

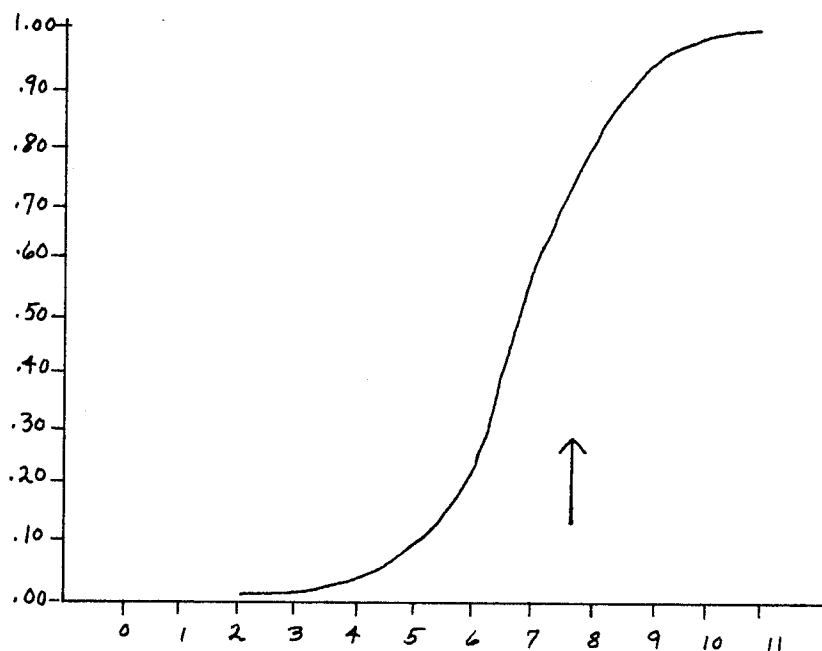


FIGURE 2^a

SCALE VALUE FOR STATEMENT NO. 51 IN ORIGINAL
ATTITUDE TOWARD THE CHURCH SCALE
S=6.9 Q=1.7

a From Thurstone and Chave, The Measurement of Attitude, 38.

²⁴ Ibid., 36-37.

An estimate of the reliability of the scale values was obtained by Thurstone and Chave who state that

the standard deviation of the distribution of the scale values was, on the average, 1.25 scale units. The scale value of an opinion is the median of its distribution on the subjective scale. Hence, the standard error of the scale value is09 when N equals 300. The probable error of the scale value is06 scale units. This is a very satisfactory reliability for the scale values which are recorded to one decimal place in our tables.²⁵

To further test the stability of the scale values, the authors ascertained the changes brought about by increasing the number of subjects from 150 to three hundred. The results indicated that three hundred subjects were sufficient to stabilize the scale values for the method of equal-appearing intervals used.

Two objective criteria were used to eliminate unsuitable statements:

1. The ambiguity, or Q-value, that is concerned with the spread of a statement over the subjective scale of equal-appearing intervals.

2. The criterion of irrelevance based on the consistency of the actual votes on a statement. An index of similarity was used to make the quantitative analysis.²⁶

The selection of a final list of forty-five statements making up the original "Attitude toward the Church Scale" was made with consideration of the criterion of ambiguity, the criterion of irrelevance, and the scale values, and by inspection of the statements.

25 Ibid., 42.

26 Ibid., 46-48.

Opinion scales, particularly those of the Thurstone variety, have been proposed by a number of opinion testers: Seashore and Hevner,²⁷ Kirkpatrick,²⁸ Ballin and Farnsworth,²⁹ Guttman,³⁰ and Festinger.³¹ Generalized or master scales have been developed by Remmers and Silance,³² Thomas-Baines,³³ and Dimitt.³⁴ A five-point rating scheme proposed by Likert has the reputation of being as useful a tool as the more time-consuming Thurstone procedure; this position has been disputed by Ferguson³⁵ and later defended

27 R. H. Seashore and K. Hevner, "A Time-Saving Device for the Construction of Attitude Scales," J. soc. Psychol., 1933, 4, 366-372.

28 C. Kirkpatrick, "The Construction of a Belief-Pattern Scale for Measuring Attitudes toward Feminism," J. soc. Psychol., 1936, 7, 421-437.

29 M. Ballin and P. R. Farnsworth, "A Graphic Rating Method for Determining the Scale Values of Statements in Measuring Social Attitudes," J. soc. Psychol., 1941, 13, 323-327.

30 L. Guttman, "A Basis for Scaling Qualitative Data," Amer. sociol. Rev., 1944, 9, 139-150.

31 L. Festinger, "The Treatment of Qualitative Data by Scale Analysis," Psychol. Bull., 1947, 44, 149-161.

32 H. H. Remmers and E. B. Silance, "Generalized Attitude Scales," J. soc. Psychol., 1934, 5, 298-312.

33 D. M. Thomas-Baines, "The Construction and Evaluation of a Scale to Measure Attitude toward Any Proposed Social Action," Bull. Purdue University, 1936, 37, 275-282.

34 M. Dimitt, "The Construction and Evaluation of a Scale to Measure Audience Attitude toward Any Play," Bull. Purdue University, 1936, 37, 275-282.

35 L. W. Ferguson, "A Study of the Likert Technique of Attitude Scale Construction," J. soc. Psychol., 1941, 13, 51-57.

by Edwards and Kinney.³⁶

Hepner notes that

several psychologists have done considerable research work in devising scales and schedules which are designed to reveal the nature and causes of dissatisfaction and satisfaction in the attitude of employers. . . . One of these investigations by Woods used the Thurstone technique of just noticeable differences and involved six years of study. Seventeen of 53 groups of statements of job segments were found to be statistically significant.³⁷

A study by Margineann³⁸ on the attitude toward church was measured with a social attitude scale, elaborated according to Thurstone's technique. The opinions were collected from three hundred students and their selection was done by forty competent persons. After this selection on the basis of the criterion of equivocality, the criterion of popularity was applied, based on 112 subjects. Fifty opinions remained to use in construction of attitude scales designed to measure Rumanian attitudes toward the church. These attitudes are represented by class 8.8 (6.0 being the average). This means that Rumanians, as compared to Americans, are more religious by 2.8 classes.

A contrast between "emotional" and "rational" written appeals is

³⁶ A. L. Edwards and K. C. Kinney, "A Comparison of the Thurstone and Likert Techniques of Attitude Scale Construction," J. appl. Psychol., 1946, 30, 72-78.

³⁷ H. W. Hepner, Psychology Applied to Life and Work, 2nd ed., New York, 1950, 469.

³⁸ E. N. Margineann, "The Attitude of the Church," Rev. Psihol., 1939, 2, 44-57.

reported by Hartmann.³⁹ Both voters and college students seem more affected by "emotionally" written appeals than by "rationally" written ones. At least the "emotional" leaflets had the greater appeal in an election at Allentown, Pennsylvania.

This interest in noting any difference between the emotional and rational response may also be noted in Husband's discussion of appeals in advertising when he says "argumentative ads aim at one's intellect, suggestive at his emotions."⁴⁰

This attempt to note a difference between the emotional and rational content is evidenced in the revised attitude scale used in the present investigation. Thurstone's technique for obtaining scale values for the revised scale was followed by V. V. Herr with the following modification. Some of the items of the original scale were reworded. Some of the statements were changed so as to represent an expression of intellectual conviction; and others were reworded to as to express an emotional tendency. For example, item No. 14 in the original scale reads:

I believe that the church furnishes the stimulus for the best leadership of our country.

It was changed to:

I have a feeling that the church furnishes the stimulus for the best leadership of our country.

This represents an item in the revised scale signifying emotional reaction.

39 G. W. Hartmann, "A Field Experiment on the Comparative Effectiveness of 'Emotional' and 'Rational' Political Leaflets in Determining Election Results," J. abnorm. soc. Psychol., 1936, 31, 99-114.

40 R. W. Husband, Applied Psychology, rev. ed., New York, 1949, 507.

Similarly, item No. 5 in the original scale was:

I believe that the church is losing ground as education advances.

It was changed to:

I am convinced that the church is losing ground as education advances.

This represents an item on the revised scale signifying intellectual conviction. The complete revised scale appears in the appendix.

A comparison of the items in the revised scale with the items in the original scale may readily be made since comparable items hold the same numbered position in each scale. (Item No. 14 in the revised scale was based on item No. 14 in the original scale.) An additional item (No. 46), from Thurstone's preliminary scale of 130 items, was added to the revised scale in order to have the same number of emotional as of intellectual items.

In a check as to whether the rewording of the original statements affected the scale values determined for each item in the original scale, the same procedure as that of Thurstone and Chave was followed in standardizing the new test, save that fewer judges were found to be sufficient. A group of twenty-three college men and women were asked to sort the forty-six revised statements into eleven piles to represent an evenly graded series of attitudes, from those which were expressive of mental states extremely against the church to those which were expressive of states very much in favor of the church.

It became evident from the results of a small group of judges that the scale values of the various items were not changed very signifi-

cantly from those computed by Thurstone and Chave. The greatest difference between the original and revised items was in item No. 31, namely, three scale points, as may be seen in Table I.⁴¹ But whether or not the new scale values differed from the original did not concern the author of the revised scale. V. V. Herr proceeded to plot the ogives for each new item and constructed a final test out of items which had Q-values less than 1.8 and which also gave for each emotional item an intellectual item with a corresponding scale value or nearly so.

Studies at Loyola University using the revised attitude scale show a correlation between intellectual and emotional scores, with no instruction about the kind of wording, equal to .44, with a probable error of .06, for 212 psychology students in eight different classes taught by six different instructors who administered the test.

Previous to this investigation mentioned above, there was found a correlation of .24 with a probable error of .07 for a group of ninety-seven subjects from all kinds of classes, all tested by the same experimenter. In two other groups the experimenter instructed the subjects as to the wording and purpose of the two parts of the test. He obtained a correlation of .65 for one group and .50 for the other, between emotional and conviction scores, showing that the testees apparently tried to balance their attitudes and gain a consistent score, once they were warned of the possibility of

⁴¹ Table I, p. 29.

TABLE I

SCALE VALUES OF CORRESPONDING ITEMS ON ORIGINAL
ATTITUDE SCALE AND REVISED ATTITUDE SCALE

Item no.	Revised: intell. or emot.	Orig. scale value	Rev. scale value	Item no.	Revised: intell. or emot.	Orig. scale value	Rev. scale value
1	I	0.8	0.5	24	I	9.4	9.4
2	E	5.2	4.8	25	E	4.2	3.6
3	E	8.1	9.0	26	I	10.6	10.5
4	E	10.2	10.4	27	I	5.9	5.7
5	I	7.2	8.5	28	I	0.6	1.0
6	I	2.4	3.4	29	E	6.8	7.9
7	I	8.5	8.6	30	I	9.2	9.9
8	E	0.5	0.8	31	E	3.0	6.0
9	I	1.4	1.0	32	E	2.0	1.6
10	I	3.4	5.2	33	E	10.2	10.9
11	I	10.6	10.8	34	I	2.1	2.1
12	I	7.6	7.6	35	E	8.0	8.5
13	I	3.6	5.1	36	E	1.6	1.8
14	E	1.3	1.6	37	E	9.0	8.9
15	E	6.3	6.4	38	I	4.3	5.5
16	E	9.0	8.6	39	I	9.5	10.1
17	E	2.7	3.0	40	I	6.0	8.2
18	I	4.8	4.8	41	I	1.8	2.1
19	E	9.3	8.2	42	I	8.6	10.0
20	I	5.5	5.7	43	I	6.7	7.0
21	E	1.0	0.6	44	E	4.9	5.7
22	E	4.1	5.9	45	E	11.0	11.0
23	E	6.5	6.2	46	E	5.9	5.6

inconsistency." The high correlation--.44--with psychology students probably indicates a guarded attitude and a tendency to balance their views in a consistency of thought.⁴²

This revised attitude scale which gives a measure of a single tendency, attitude toward the church, and at the same time two partial scores, one for the degree of favorableness of conviction and the other for that of feelings, is the second instrument used in the present study.

⁴² The writer of this paper is indebted to the Reverend V. V. Herr, S.J., Ph.D., Chairman, Department of Psychology, Loyola University, Chicago, for information from his personal files on his revision of the Thurstone scale.

CHAPTER III

THE FINDINGS

Up to this point the present writer has tried to outline how we may think of attitude and emotion in the concept of personality. We have reviewed the pertinent material in the areas of attitude and emotion. Further, the attempt has been made to point the way for a paper-and-pencil test to give a measure of attitude and also a measure of emotion. All of this has aimed toward an answer to the original problem of the study, namely, whether people who are excessively or abnormally emotional express their attitude toward the church emotionally or intellectually.

College students were influential in the development of both tests used in the present survey. Subjects for this survey were taken from Loyola University and Roosevelt College. Both schools are located in the city of Chicago. Loyola University is predominantly Catholic, and it was felt that the sample would be more representative if a goodly portion of the sample could come from a school predominantly non-Catholic.

A total of 199 male and female college students were tested. One hundred and twenty-one of the 199 subjects were enrolled at Loyola University, and seventy-eight of the 199 subjects were enrolled at Roosevelt College. Calculations were based on 177 subjects (see Tables II and III)

since twenty-two of the subjects invalidated the tests used in the survey because of an incomplete Pressey X-O Test and/or an incomplete revised attitude scale. Fourteen of the twenty-two subjects were from Loyola University, while eight of these twenty-two subjects were from Roosevelt College.

TABLE II

AN ANALYSIS OF THE DATA ON THE AGE, SEX, AND THE SCHOOL
OF THE 177 SUBJECTS USED IN THE FINDINGS OF THE
SURVEY ON ATTITUDE AND EMOTION

School	Age		Sex	
	Range	Mean	Males	Females
Loyola University	18-50	25.5	50	57
Roosevelt College	17-32	21.4	44	26
Total Sample	17-50	23.9	94	83

Subjects were recruited from beginning classes in psychology where the instructor of the class felt that his group would be receptive, and for practical purposes not familiar with the tests used.

Before the actual testing began, the subjects were told that a study was being conducted involving an attitude scale and a test of emotions. It was stressed that, in order for the tests to be valid, honesty was essential and, therefore, their anonymity would be guaranteed. Their name was not to appear on either test. The only identification required was sex,

age, and religious affiliation, which would aid in the interpretation of results. They were also informed that each set of tests had a number in the upper left hand corner in order to identify the same person as having completed the two tests in a particular set. It was also explained that, if they wished, they could copy that number since the test results would be available at a later date using those same numbers as a means for their own identification. Every effort was made to insure the subjects' honesty and complete cooperation.

TABLE III

DATA ON THE RELIGIOUS AFFILIATION ACCORDING TO SCHOOL
OF 177 SUBJECTS USED IN FINDINGS OF SURVEY

Religious affiliation	Loyola		Roosevelt		Total	
	No.	Per cent	No.	Per cent	No.	Per cent
Catholic	79	74	10	14	89	50
Protestant	27	25	12	17	39	22
Jew	1	1	35	50	36	20
No Religion Given	0	0	13	19	13	8
Total	107	100	70	100	177	100

After these preliminary instructions, the revised attitude scale was distributed, and the instructions thereon were read to the group. It was explained to the subjects that as they finished the attitude scale,

if they would raise their hand, the test of emotions would be given them, and they could read the instructions printed thereon and complete the form. After questions pertaining to the conduct of the testing were answered, the subjects completed the attitude scale. As they finished the attitude scale, they exchanged it for a Pressey X-0 Test bearing the same number as the attitude scale in the upper left hand corner. This was carefully supervised, and all papers were checked to insure accuracy.

The revised attitude scale and the Pressey X-0 Tests were scored.

Scores on the attitude scale may be used to indicate:

1. favorableness or unfavorableness in attitude toward the church determined from the sum of the two partial scores; the lower the score the more favorable the attitude;
2. emotional content in the attitude (based on the emotional score); the lower the score the more favorable the person, as far as feeling is concerned; and
3. intellectual conviction in the attitude (based on the intellectual score); the lower the score the more favorable the person, as far as convictions are concerned.

Scores on the Pressey X-0 Tests may be used for a measure of:

1. general affectivity (based on total or affectivity score); the lower the score the less the affectivity or emotionality; and
2. idiosyncrasy (based on deviation or idiosyncrasy score); the lower the score the less the individuality or differentness, or the more stable the emotional adjustment.

The Otis correlation method was used to determine all of the correlations in this study. Data was plotted on the correlation sheets so that all scores from the attitude scale extended from low scores (favorable ones) at the bottom of the Y variable to high scores toward the top of the Y variable; while low scores (most stable in emotional adjustment) from the Pressey X-0 Tests were scaled from the left side of the X variable to high scores toward the right side of the X variable. The first correlations were between the most inclusive scores, namely, the total attitude score and general affectivity and also between total attitude score and idiosyncrasy.

The coefficient of correlation between total score on the attitude scale and general affectivity was $-.20$ with a probable error of $.05$. The coefficient of correlation between total attitude score and idiosyncrasy was $.22$ with a probable error of $.05$. These correlations, though low, are statistically significant for a sample of 177 subjects.¹ The results indicate:

1. a negative relationship between total attitude toward the church scores and general affectivity scores, or the more favorable the attitude (indicated by a low score) the greater the affectivity or emotionality (indicated by a high score).
2. a positive relationship between total attitude toward the church and idiosyncrasy, or the more favorable the attitude

1 E. F. Lindquist, A First Course in Statistics, Their Use and Interpretation in Education and Psychology, rev. ed., New York, 1942, 191 ff.

" (low score) the more stable the emotional adjustment
(low score).

Without further interpretation at this point, it was decided to correlate each of the partial scores of the revised attitude scale with general affectivity and also with idiosyncrasy of the Pressey tests. The coefficient of correlation between emotional score on the attitude scale and general affectivity on the Pressey tests was $-.11$ with a probable error of $.05$. The coefficient of correlation between the intellectual score on the attitude scale and general affectivity on the Pressey was $-.18$ with a probable error of $.05$. These results are not statistically significant for a sample of 177 subjects.² The coefficient of correlation between emotional score on the attitude scale and idiosyncrasy score on the Pressey was $.22$ with a probable error of $.05$. The coefficient of correlation between intellectual score on the attitude scale and the idiosyncrasy score on the Pressey was $.24$ with a probable error of $.05$. These results, while low and relatively negligible, are statistically significant for a sample of 177 subjects.³ These results are presented more concisely in Table IV. The results indicate some relationship between (1) emotional score on the attitude scale and the idiosyncrasy score on the Pressey, and (2) intellectual score on the attitude scale and idiosyncrasy score on the Pressey, giving some slight indication that those individuals with most favorable

2 Ibid., 191 ff.

3 Ibid.

emotional as well as intellectual attitude also were most stable in emotional adjustment.

TABLE IV

RESULTS OF CORRELATIONS BETWEEN EMOTIONAL AND INTELLECTUAL SCORES
OF REVISED ATTITUDE SCALE WITH GENERAL AFFECTIVITY
AND/OR IDIOSYNCRASY SCORES OF PRESSEY TESTS

Sample	N	Attitude scores	Pressey X-0	
			General affectivity	Idiosyncrasy
Loyola	107	Emotional		.19 ± .06
		Intellectual		.21 ± .06
Roosevelt	70	Emotional		.11 ± .08
		Intellectual		.15 ± .08
Total	177	Emotional	-.11 ± .05	.22 ± .05
		Intellectual	-.18 ± .05	.24 ± .05

It was then decided to break down each of the significant correlations listed immediately above according to school. For the Roosevelt group the coefficient of correlation between emotional score on the attitude scale and idiosyncrasy score on the Pressey was .11 with a probable error of .08. The coefficient of correlation between intellectual score on the attitude scale and idiosyncrasy score on the Pressey for the Roosevelt group was .15 with a probable error of .08. These results are not statistically signifi-

cant for a sample of seventy subjects.⁴ These results are presented more concisely in Table IV. For the Loyola group the coefficient of correlation between emotional score on the attitude scale and idiosyncrasy score on the Pressey was .19 with a probable error of .06. The coefficient of correlation between intellectual score on the attitude scale and idiosyncrasy score on the Pressey for the Loyola group was .21 with a probable error of .06. These results are not statistically significant for a sample of 107 subjects. They are presented more succinctly in Table IV.

The sample was then broken down into groups according to religious affiliation for the purpose of comparing the emotional and intellectual scores of the attitude scale with the idiosyncrasy score of the Pressey tests. The coefficient of correlation between emotional score on the attitude scale and idiosyncrasy score on the Pressey for the Catholic group was .27 with a probable error of .07. This result is statistically significant at the 2 per cent level of confidence for a sample of eighty-nine subjects.⁵ The results give some slight indication for the Catholic group that those most favorable emotionally in attitude tend to have a more stable emotional adjustment. The coefficient of correlation between intellectual score on the attitude scale and idiosyncrasy score on the Pressey for the Catholic group was .18 with a probable error of .07. This result is not

4 Ibid.

5 Ibid.

statistically significant for a sample of eighty-nine subjects.⁶ The results stated above are presented more concisely in Table V⁷ along with the results to be explained presently.

For the Protestant group the coefficient of correlation between emotional score on the attitude scale and idiosyncrasy score on the Pressey was .40 with a probable error of .09. This result is statistically significant at the 2 per cent level of confidence for a sample of thirty-nine subjects.⁸ The results give some slight indication for the Protestant group that those most favorable emotionally in attitude tend to have a more stable emotional adjustment. The coefficient of correlation between intellectual score on the attitude scale and idiosyncrasy score on the Pressey was .26 with a probable error of .10. This result is not statistically significant for a sample of thirty-nine subjects.⁹

The coefficient of correlation between emotional score on the attitude scale and idiosyncrasy score on the Pressey for the Jewish group was .16 with a probable error of .11. For the Jewish group the coefficient

6 Ibid.

7 Table V, p. 40.

8 E. F. Lindquist, Statistical Analysis in Educational Research, New York, 1940, 210 ff.

9 Ibid.

TABLE V

RESULTS FROM CORRELATIONS BETWEEN EMOTIONAL AND INTELLECTUAL
 SCORES ON ATTITUDE SCALE WITH IDIOSYNCRASY SCORES ON
 PRESSEY FOR DIFFERENT RELIGIOUS AFFILIATIONS

Religion	Attitude scale	Pressey X-0 Idiosyncrasy score
Catholic	Emotional	.27 ± .07
	Intellectual	.18 ± .07
Protestant	Emotional	.40 ± .09
	Intellectual	.26 ± .10
Jewish	Emotional	.16 ± .11
	Intellectual	.10 ± .11
No Religion Given	Emotional	.30 ± .02
	Intellectual	.24 ± .18

of correlation between intellectual score on the attitude scale and idiosyncrasy score on the Pressey was .10 with a probable error of .11. These results are not statistically significant for a sample of thirty-six subjects.¹⁰

For the group with no stated religious affiliation the coefficient of correlation between emotional score on the attitude scale and idiosyncrasy score on the Pressey was .30 with a probable error of .02. The coefficient of correlation between intellectual score on the attitude scale and idiosyncrasy score on the Pressey for the group with no stated religious affiliation was .24 with a probable error of .18. These results are not statistically significant for a sample of thirteen subjects.¹¹

A summary of the entire survey will be given in the chapter to follow.

10 Ibid.

11 Ibid.

CHAPTER IV

SUMMARY AND CONCLUSIONS

An investigation was made into the relationship between the relative amount of general emotionality, emotional stability, and the emotion contained in an attitude, specifically in the attitude toward the church. The instruments of measurement in the survey were the following: Herr's revision of the Attitude toward the Church Scale, Thurstone, Revised, 1943; and the Pressey X-O Tests. One hundred and ninety-nine male and female college students were tested. One hundred and twenty-one subjects were enrolled in a predominantly Catholic University, and seventy-eight of the subjects were enrolled in a predominantly non-Catholic college. The findings are based on a group of 177 out of the original 199 subjects since twenty-two tests were invalid.

The total attitude scores were correlated with general affectivity scores on the Pressey tests, and a significant negative correlation was noted. This indicates that those with the lowest total attitude score (and hence the most favorable attitudes) are highest in affectivity. Since some prominent writers feel that this score of the Pressey tests is of little value, the importance that may attach to this observation is simply that those individuals with the most favorable attitude also tended to

react to, or cross out, most items on the Pressey X-O Tests. Whether this indicates a greater affectivity is questionable.

The correlation between the total attitude score (letting the top rank person be called favorable) and idiosyncrasy (letting the top rank person be called stable in emotional adjustment) was positive and statistically significant. From this it may follow that those most favorable in attitude toward the church deviated least from the modal choice of words, or had the least individuality or differentness, or tended to have the most stable emotional adjustment.

Use of the partial scores of the attitude scale, correlated with general affectivity and idiosyncrasy, gave the following results. Emotional tendency as well as intellectual conviction in the attitude correlated negatively, but not significantly, with affectivity. These results are in the same direction as total attitude correlated with affectivity. However, for either emotional tendency or intellectual conviction in the attitude, correlated with affectivity, any significant relationship is lost.

On the other hand, emotional tendency as well as intellectual conviction in the attitude correlated in a positive, significant manner with idiosyncrasy on the test of emotions. Thus, those most favorable in their attitude both on the basis of emotional tendency and intellectual conviction also deviated least from modal choice of words, or had the least individuality, or had the most stable emotional adjustment. Since here no distinction is made between the emotional tendency and intellectual conviction of attitude as related to the emotional measure, further analysis was in order.

Treatment of the emotional and intellectual factors in attitude with idiosyncrasy among each of the two schools comprising the sample showed that for neither group was there a significant statistical relationship.

A final analysis of these same factors, emotional and intellectual scores with idiosyncrasy, on the basis of religious affiliation, revealed the following data: For the Catholic and Protestant groups there was a positive relationship, statistically significant at the 2 per cent level of confidence, between the emotional tendency in attitude and idiosyncrasy. This indicates some relationship between that which the emotional score of the attitude scale measures and that which the idiosyncrasy score of the Pressey X-O Tests measures. Those most favorable emotionally in attitude also tend to have a more stable emotional adjustment.

It is interesting to note what has been stated above about contrasting the emotional tendency in attitude and idiosyncrasy. A low but statistically significant correlation is noted for the total sample as well as for two of the groups based according to religious affiliation; however, any significant relationship is lost in correlating these same factors according to the two schools comprising the total sample.

The net result of these breakdowns is interesting in the light of the statistically significant mean scores on the attitude scale for each of the religious groups. The rank order of favorableness of attitude toward the church is Catholic, Protestant, Jewish, and finally those with no religious affiliation. These differences are noted in the records of both the authors of the original attitude scale and the author of the revised

attitude scale. The results of mean scores on the attitude scale in the present study compare favorably with this rank order found by these other writers. These results materially affected the total sample and each school contributing to the total sample.

The general conclusions that may be drawn from these findings are as follows: (1) There is some statistical evidence to indicate a relationship between emotional adjustment and the emotional tendency in attitude toward the church for Catholics and Protestants. (2) There is some statistical evidence to indicate that the emotional score on the revised attitude scale and the idiosyncrasy score on the Pressey are related.

Future studies may elaborate or shed light on each of these two general conclusions. Some of the major shortcomings of this study that may prove valuable in the future are the following: (1) increase in the size of the sample, especially classifying each group according to religious affiliation, (2) other means of control upon which to base conclusions, such as a measure of intellectual conviction, including the time factor for completing the Pressey X-O Tests, or a separate and distinct measure of intelligence; and (3) a measure of attitude toward some object other than church to correlate with emotionality.

Whatever the results of tomorrow's investigations may bring, it is sincerely hoped that this survey will be of some aid in future psychological research.

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APPENDIX I

SCALE OF ATTITUDES TOWARD THE CHURCH (Thurstone, Revised, 1943)

You are asked to read all the statements and to check every statement with which you agree. Make sure you have read all 46 statements. You may read them in any order and as often as you desire. There is no time limit but the total operation will require at least 12 minutes. Do not change the wording but check the statement as you find it or just skip it. Please do not discuss the statements with others before finishing your indorsement of them. You need not write your name if you do not wish to do so, but be sure to give your age, sex, and religious affiliation.

(Place your check mark inside the parenthesis found at the beginning of line.)

Name _____ Age _____ Sex _____ Religion _____

1. () I am convinced that the church is a divine institution, and that it should command my highest loyalty and respect.
2. () I am neither for nor against the church, but I feel that church-going will not do anyone any harm.
3. () I fear that the good done by the church is not worth the money and energy spent on it.
4. () I cannot help feeling that the church is a monument to human ignorance.
5. () I am convinced that the church is losing ground as education advances.
6. () I know that the church is trying to adjust itself to a scientific world and therefore it deserves support.
7. () I have convinced myself that the teaching of the church is altogether too superficial to be of interest to me.
8. () I have a strong feeling that the church is the greatest agency for the uplift of the world.
9. () I am certain that the church has a most important influence in the development of moral habits and attitudes.
10. () I know that the church is necessary, but like all other human institutions it has its faults.
11. () I have reasoned out that the church is a harmful institution, breeding narrow-mindedness, fanaticism, and intolerance.

12. () I argue with myself that the church is too conservative for me, and so I stay away.
13. () I agree with the ideals of my church, but I am tired of its denominationalism.
14. () I have a feeling that the church furnishes the stimulus for the best leadership of our country.
15. () I'm not much opposed to any church, but when I feel discontented with its leaders I stay away.
16. () I have a strong suspicion that the church is hopelessly allied with reactionary forces.
17. () I am sympathetic toward the church because it practices the Golden Rule fairly well and has a consequent good influence.
18. () I think about the church only to the extent of attending occasionally.
19. () I am annoyed at the inconsistency of the church, for it cannot give examples of what it teaches.
20. () Sometimes I think the church is worth while, and sometimes I doubt it.
21. () My church gives me feelings of consolation for it is the main guiding influence in my life.
22. () I enjoy the spiritual uplift I get from the church, but I do not agree with its theology.
23. () My emotional reaction toward the church is negative due to lack of interest.
24. () I am convinced that the church is shackled with monied interests and does not practice its ideals.
25. () I am sympathetic toward the church, but I am not active in its endeavors.
26. () I think it is evident that the church is a parasite on society.
27. () I know too little about the church to express an opinion.
28. () It is evident to me that the church is the most important institution in the world outside of the home.
29. () I admit that I am slightly prejudiced against the church and attend only on special occasions.
30. () I have concluded that a man cannot be honest in his thinking and indorse what the church teaches.
31. () There is much wrong with my church, but I am sentimentally so attached to it that I want to help improve it.
32. () I entertain the feeling that the church promotes a fine brotherly relationship between people and nations.
33. () I despise the church because it is unreservedly stupid and futile.
34. () I approve of the church because I know that church attendance is a good index of the nation's morality.
35. () I feel that the church is petty, too easily disturbed by matters of little importance.
36. () In the church I find my best companions and can express my best sentiments of self-respect.

- 37. () I am afraid the church is non-scientific and emotional, depending for its influence upon fear of God and of hell.
- 38. () I rationally try to defend the church but I believe its influence is on the decline.
- 39. () It is logically absurd that any thinking man should be interested in the church.
- 40. () My reflective attitude toward the church is best described as one of indifference.
- 41. () I know that anyone who will work in a modern church will reasonably appreciate its indispensable value.
- 42. () It is clear to me that the church deals in platitudes and is afraid to follow the logic of truth.
- 43. () My conscious attitude toward the church is one of neglect, with a slight tendency toward disapproval.
- 44. () I feel only slightly concerned about the affairs of the church.
- 45. () I experience nothing but contempt and resentment for the church.
- 46. () I worry too little about the church to express any general attitude.

Scoring of the Revised Scale:

To determine the intellectual score of an individual one merely adds the scores of all the intellectual statements indorsed. This summation is divided by the number of intellectual statements indorsed. For example: Suppose a subject has indorsed the following intellectual statements: 8, 17, and 32. The scores of these statements are respectively: .5, 2.7, and 2.0. The sum of these scores is 5.2. The number of intellectual statements indorsed is 3. The summation divided by the number of intellectual statements indorsed is the intellectual score 1.73.

To determine the emotional score one merely adds the scores of all the emotional statements indorsed. This summation is divided by the number of emotional statements indorsed. For example: Suppose that a subject has indorsed the following emotional statements: 1, 6, 13, and 24. The scores of these statements respectively are: .8, 2.4, 3.6, and 9.4. The sum of these scores is 16.2. The number of emotional statements indorsed is 4. The summation divided by the number of emotional statements indorsed is the emotional score 4.05.

Thus the scale gives a measure of a single tendency and at the same time gives two partial scores, one for a kind of strength of conviction, and one for a feeling state.

APPENDIX II

APPROVAL SHEET

The thesis submitted by Marshall J. Webb has been read and approved by three members of the Department of Psychology.

The final copies have been examined by the director of the thesis and the signature which appears below verifies the fact that any necessary changes have been incorporated, and that the thesis is now given final approval with reference to content, form, and mechanical accuracy.

The thesis is therefore accepted in partial fulfillment of the requirements for the Degree of Master of Arts.

July 23, 1951
Date

Frank J. Kobler
Signature of Adviser